REMARKS

In this Response, Applicants amend claims 1, 8, 13, 14 and 15. No new matter has been added. Support for the claim amendments can be found at least at page 8, lines 14-23 and page 10, lines 11-17 of the specification.

Claims 1, 7, 8, 13-15 and 17 are currently pending, of which claims 1, 8, 13, 14 and 15 are independent. Claims 2-5 and 9-12 remain withdrawn. Applicants respectfully submit that the pending claims define over the art of record.

I. Claim Amendments

A. Independent Claim 1

Applicants thank the Examiner for the helpful comments provided in the Office Action. Applicants amend the claims, as described below, in an effort to provide sufficient structure to differentiate the current claims from the cited references.

Independent claim 1 has been amended to recite that a lubricating grease **contacts** a paste wax within an inner space of an outer member, in which the lubricating grease has a **first consistency** and the paste wax comprising an oil/fat component which has a **second consistency**. Claim 1 has also been amended to recite that the first consistency of the lubricating grease is **higher** than the second consistency of the paste wax so that the paste wax does **not** alter the lubricating action of the lubricating grease. Support for the amendments to claim 1 can be found at least at page 8, lines 14-23 of the specification.

As discussed on page 8 of the specification, the paste wax is disposed in the joint to retain the rolling members on the inner diameter portions of the ring-shaped roller members. The lubricating grease is disposed in the joint to perform a lubricating action. Both the lubricating grease and the paste wax are disposed in the inner space of the outer member in such a way that the lubricating grease contacts the paste wax. Thus, there is a risk that the paste wax may alter the lubricating action of the lubricating grease because of the mixed manner in which the lubricating grease and the paste wax are present in the inner space. The claimed invention ensures that the paste wax does **not** alter the lubricating action of the lubricating grease, by

making the first consistency of the lubricating grease **higher** than the second consistency of the paste wax.

B. Independent Claim 8

Independent claim 8 has been amended to recite a joint boot surrounding the joint, and a lubricating grease disposed within the joint boot for performing a lubricating action. Claim 8 also recites a solid wax applied on inner diameter portions of roller members for retaining the rolling members on the inner diameter portions of the roller members. The solid wax is formed of a material that does not chemically react with the lubricating grease and the joint boot. Support for the amendments to claim 8 can be found at least at page 10, lines 11-17 of the specification.

As discussed on page 10 of the specification, the solid wax is provided in the joint to retain the rolling members on the inner diameter portions of the roller members. The solid wax is formed of a material that does **not** chemically react with the lubricating grease and the joint boot. This ensures that the solid wax does not change the quality of the joint boot and the lubricating grease.

II. Miscellaneous Issues Raised in Office Action

The Examiner asserts that Applicants have failed to demonstrate criticality of any specific wax consistency (Office Action, page 3).

Applicants respectfully submit that the criticality of the paste wax recited in claim 1 is discussed at least at page 8, lines 14-23 of the specification. There is a risk that the paste wax may alter the lubricating action of the lubricating grease because of the mixed manner in which the lubricating grease and the paste wax are present in the inner space. The claimed invention ensures that the paste wax does **not** alter the lubricating action of the lubricating grease, by making the first consistency of the lubricating grease **higher** than the second consistency of the paste wax. Thus, the relationship between the first consistency and the second consistency, recited in claim 1, is critical to maintaining the proper lubricating action of the lubricating grease.

Applicants also respectfully submit that the criticality of the solid wax recited in claim 8 is discussed at least at page 10, lines 11-17 of the specification. The solid wax is formed of a material that does **not** chemically react with the lubricating grease and the joint boot. This ensures that the solid wax does not change the quality of the joint boot and the lubricating grease. Thus, the material forming the solid wax, recited in claim 8, is critical to the proper functioning of the lubricating grease and the joint boot.

The Examiner also asserts that the recitation of "to be enclosed" in previously presented claim 1 indicates that the lubricating grease is merely intended to be used with the joint, and therefore does not structurally limit the joint (Office Action, page 4). Similarly, the Examiner asserts that claim 8 does not recite that the joint is structurally limited by the joint boot or lubricating grease (Office Action, page 4).

Amended claim 1 positively recites that the joint includes a lubricating grease and a paste wax. Thus, the lubricating grease and the paste wax structurally limit the joint recited in claim 1.

Amended claim 8 positively recites that the joint includes a joint boot, a lubricating grease, and a solid wax. Thus, the joint boot, lubricating grease, and the solid wax structurally limit the joint recited in claim 8.

Applicants also note that the Examiner has issued a final Office Action even though this Office Action is the first action after filing the RCE. Applicants respectfully note that they, in good faith, amended the claims in an effort to further distinguish the cited references from the claimed invention. Specifically, Applicants amended the claims to recite the different consistencies of the paste wax and the lubricating grease (claims 1, 13 and 14), and that the materials do not interact (claims 8 and 15). As such, Applicants respectfully urge the Examiner to reconsider and withdraw the finality of the Office Action and to enter this amendment. Applicants appreciate the Examiner's kind consideration of this point.

III. Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1, 7, 8, 13-15 and 17 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Number 5,989,124 to Goto (hereafter "Goto") in view of U.S. Patent Number

3,239,291 to Batt (hereafter "Batt"), U.S. Patent Number 1,982,932 to Scriebner (hereafter "Scriebner") and U.S. Patent Number 1,907,015 to Swart (hereafter "Swart"). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 1, 7, 8, 13-15 and 17 as set forth below.

A. Claim 1

Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest at least the following feature of independent claim 1: "said lubricating grease contacts said paste wax within said inner space of said outer member; and wherein said first consistency of said lubricating grease is higher than said second consistency of said paste wax, so that said paste wax does not alter said lubricating action of said lubricating grease."

The Goto reference relates to a tripod type constant velocity universal joint. The universal joint includes a trunnion 66, rolling elements 6 and a roller 72. In a former manufacturing method, the rolling elements are temporarily adhered with grease onto the roller inner circumferential surface. A stopper of the roller prevents the rolling elements from coming out when the roller, together with the rolling elements, is fitted over the trunnion. See Goto, column 6, lines 9-14, Figure 25 and related text.

However, the Goto reference does not teach or suggest that the grease is in contact with a paste wax, wherein a first consistency of the grease is **higher** than a second consistency of the paste wax, as required by claim 1. The Goto reference also does not teach or suggest that a paste wax does **not** alter the lubricating action of the grease, as required by claim 1. The addition of the Batt reference fails to cure this deficiency.

The Batt reference relates to roller bearings and means for retaining the needles or rollers in their cage before assembly of the bearing. A caged roller assembly includes a roller cage and rollers secured in the cage by a wax bonding. The wax is preferably a grease or oil-based wax which readily blends with another lubricant which is used after installation of the bearing in its races. See Batt, page 3, column 1.

The Batt reference does not teach or suggest that the grease is in contact with a paste wax, wherein a first consistency of the grease is **higher** than a second consistency of the paste wax, as required by claim 1. Moreover, in the Batt reference, the wax blends with the lubricant after installation. Thus, the blending of the wax in the lubricant changes the chemical composition of the lubricant and alters the lubricating action of the lubricant. As such, the Batt reference also does not teach or suggest that the wax does **not** alter the lubricating action of the lubricant, as required by claim 1. In fact, the Batt reference teaches away from this feature of claim 1, because the wax in the Batt reference blends with the lubricant and alters its lubricating action. The addition of the Scriebner reference fails to cure this deficiency.

The Scriebner reference relates to assembling tapered bearing rollers in a cup or outer race. A bearing cup 1 or outer race has a conical bore or raceway 2 and a series of taper rollers 3 mounted in the raceway. Paraffin or other hard wax is used to coat the exposed portions of the periphery of the rollers 3, the ends of the cup 1 and the outer periphery of the cup 1. The paraffin may also enter the triangular spaces 5 between adjacent rollers and the cup. The paraffin coating may be confined to the rollers and the portions of the bore 2 of the cup inwardly of the ends. See Scriebner, page 2, column 2.

The Scriebner reference does not teach or suggest that the grease is in contact with a paste wax, wherein a first consistency of the grease is **higher** than a second consistency of the paste wax, as required by claim 1. The Scriebner reference also does not teach or suggest that a paste wax does **not** alter the lubricating action of the grease, as required by claim 1. The addition of the Swart reference fails to cure this deficiency.

The Swart reference relates to anti-friction bearings which include rolling elements (as an annular series of balls or rollers). A soluble cage is provided in which the rolling elements are assembled in an annular series before being inserted in the raceways. The balls or rollers are held in juxtaposition in the cage. The cage is formed of waxy substance readily soluble in a hydrocarbon or lubricating oil, and the waxes used are pentichloride naphthalene, bee's wax and carnuba wax, etc. The cage serves as a lubricant initially until it is dissolved and displaced by the lubricating oil. See Swart, page 2, columns 1 and 2.

The Swart reference does not teach or suggest that the grease is in contact with a paste wax, wherein a first consistency of the grease is **higher** than a second consistency of the paste wax so that the paste wax does not alter the lubricating action of the grease, as required by claim 1. Moreover, in the Swart reference, the waxy substance blends with the lubricant oil after installation. Thus, the blending of the wax in the lubricant changes the chemical composition of the lubricant and alters the lubricating action of the lubricant. As such, the Swart reference also does not teach or suggest that the paste wax does **not** alter the lubricating action of the grease, as required by claim 1. In fact, the Swart reference teaches away from this feature of claim 1, because the wax in the Swart reference blends with the lubricant and alters its lubricating action.

As such, the Goto, Batt, Scriebner and Swart references, alone or in any combination, do not teach or suggest "said lubricating grease contacts said paste wax within said inner space of said outer member; and wherein said first consistency of said lubricating grease is higher than said second consistency of said paste wax, so that said paste wax does not alter said lubricating action of said lubricating grease," as recited in claim 1.

The Examiner asserts that the Batt, Scriebner and Swart references teach that it is desirable to use a wax to hold rollers in place during assembly and, therefore, it would have been obvious to one of ordinary skill in the art to modify the Goto reference to use wax for the purpose of simplifying assembly (Office Action, page 3). Applicants respectfully disagree with the Examiner's interpretation of the references. Applicants' claim 1 is directed to easily retaining rolling members, e.g. needle bearings, on a rolling member, and to providing a paste wax which does **not** alter the lubricating action of a lubricating grease that is in contact with the paste wax. Neither of the Goto, Batt, Scriebner and Swart references recognizes the risk of a paste wax that contacts a lubricating grease altering the lubricating action of the lubricating grease. Similarly, neither of the Goto, Batt, Scriebner and Swart references teaches or suggests providing a paste wax that does **not** alter the lubricating action of the lubricating grease, as required by claim 1. As such, one of ordinary skilled in the art would not be able or motivated to combine the teachings of the references to reach the claimed invention.

The Examiner further asserts that the prior art wax structure is presumed to inherently have Applicants' claimed properties in accordance with MPEP 2112.01 (Office Action, page 5). MPEP 2112.01 recites:

> "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best,* 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada,* 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best,* 562 F.2d at 1255, 195 USPQ at 433."

Applicants respectfully submit that a *prima facie* case of obviousness has not been established, because the claimed and prior art joints are not identical or substantially identical in structure or composition. The claimed invention includes a joint structurally limited by a lubricating grease having a first consistency and a paste wax having a second consistency, wherein the first consistency of the lubricating grease is **higher** than the second consistency of the paste wax, so that the paste wax does not alter the lubricating action of the lubricating grease. Neither of the prior art joints includes with a paste wax and a lubricating grease with the above consistency relationship, as required by claim 1. As such, the claimed and prior art are not identical or substantially identical in structure or composition.

Assuming *arguendo* that a *prima facie* case of obviousness has been established, Applicants respectfully submit that such a *prima facie* case can be rebutted by the fact that the prior art joints do not possess the characteristics of the claimed invention. Neither of the prior art joints ensures that a paste wax does **not** alter the lubricating action of a lubricating grease, as required by claim 1. Indeed, the prior art references **teach away** from this feature of claim 1, because the wax in the prior art joints blends in the lubricating grease, thereby altering the chemical composition and lubrication action of the lubricating grease. As such, the prior art joints do not possess the characteristics of the claimed invention.

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest each and every feature of independent claim 1. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1.

B. Claim 7

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest each and every feature of independent claim 1.

Claim 7 depends from independent claim 1, and adds separate and patentable limitations to claim 1. As such, for this and the reasons set forth above, Applicants respectfully submit that dependent claim 7 also defines over the art of record.

C. Claim 8

Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest at least the following feature of independent claim 8: "said solid wax is formed of a material that does not chemically react with said lubricating grease and said joint boot."

The Goto reference does not teach or suggest a solid wax. As such, the Goto reference does not teach or suggest "said solid wax is formed of a material that does **not** chemically react with said lubricating grease and said joint boot," as recited in claim 8. The addition of the Batt reference fails to cure this deficiency.

In the Batt reference, the wax blends with another lubricant after installation. That is, the wax is in the Batt reference chemically interacts and blends with the lubricant. As such, the Batt reference teaches away from "said solid wax is formed of a material that does **not** chemically react with said lubricating grease and said joint boot," as recited in claim 8. The addition of the Scriebner reference fails to cure this deficiency.

In the Scriebner reference, paraffin or other hard wax is used to coat the exposed portions of the periphery of the rollers 3, the ends of the cup 1 and the outer periphery of the cup 1. However, the Scriebner reference does not teach or suggest "said solid wax is formed of a material that does **not** chemically react with said lubricating grease and said joint boot," as recited in claim 8. The addition of the Swart reference fails to cure this deficiency.

In the Swart reference, the waxy substance blends with the lubricant oil after installation. That is, the waxy substance in the Swart reference chemically interacts and blends with the lubricant oil. As such, the Swart reference teaches away from "said solid wax is formed of a material that does **not** chemically react with said lubricating grease and said joint boot," as recited in claim 8.

As such, the Goto, Batt, Scriebner and Swart references, alone or in any combination, do not teach or suggest "said solid wax is formed of a material that does not chemically react with said lubricating grease and said joint boot," as recited in claim 8.

The Examiner asserts that the Batt, Scriebner and Swart references teach that it is desirable to use a wax to hold rollers in place during assembly and, therefore, it would have been obvious to one of ordinary skill in the art to modify the Goto reference to use wax for the purpose of simplifying assembly (Office Action, page 3). Applicants respectfully disagree with the Examiner's interpretation of the references. Applicants' claim 8 is directed to easily retaining rolling members, e.g. needle bearings, on a rolling member, and to providing a solid wax formed of a material that does **not** chemically react with a lubricating grease and a joint boot. Neither of the Goto, Batt, Scriebner and Swart references recognizes the risk of a solid wax provided in the joint chemically reacting with a joint boot surrounding the joint and a lubricating grease also provided in the joint. Similarly, neither of the Goto, Batt, Scriebner and Swart references teaches or suggests providing a solid wax formed of a material that does **not** chemically react with the lubricating grease and the joint boot. As such, one of ordinary skilled in the art would not be able or motivated to combine the teachings of the references to reach the claimed invention.

The Examiner further asserts that the prior art wax structure is presumed to inherently have Applicants' claimed properties in accordance with MPEP 2112.01 (Office Action, page 5). Applicants respectfully submit that a *prima facie* case of obviousness has not been established, because the claimed and prior art joints are not identical or substantially identical in structure or composition. The claimed invention includes a joint structurally limited by a solid wax formed of a material that does **not** chemically react with the lubricating grease and the joint boot, as required by claim 8. Neither of the prior art joints includes a solid wax formed of a material as

required by claim 8. As such, the claimed and prior art are not identical or substantially identical in structure or composition.

Assuming *arguendo* that a *prima facie* case of obviousness has been established, Applicants respectfully submit that such a *prima facie* case can be rebutted by the fact that the prior art joints do not possess the characteristics of the claimed invention. Neither of the prior art joints ensures that the solid wax does **not** chemically react with the lubricating grease and the joint boot, as required by claim 8. Indeed, the prior art references **teach away** from this feature of claim 8, because the wax in the prior art joints blends in the lubricating grease, thereby chemically reacting with the lubricating grease. As such, the prior art joints do not possess the characteristics of the claimed invention.

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest each and every feature of independent claim 8. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 8.

D. Claim 13

Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest at least the following feature of independent claim 13: "supplying paste wax to an inner diameter portion of said roller member, said paste wax comprising an oil/fat component which has a consistency lower than that of a lubricating grease to be enclosed in said inner space of said outer member, wherein said lubricating grease contacts said paste wax within said inner space of said outer member."

As set forth above in connection with independent claim 1, the Goto, Batt, Scriebner and Swart references, alone or in any combination, do not teach or suggest a paste wax comprising an oil/fat component which has a consistency lower than that of a lubricating grease to be enclosed in an inner space of an outer member, as required by claim 1. Applicants respectfully submit that the foregoing arguments also apply to claim 13.

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, also fail to teach or suggest each and every feature of independent claim 13. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 13.

E. Claim 14

Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest at least the following feature of independent claim 14: "supplying paste wax to said inner diameter portion of said roller member to retain said plurality of provided rolling members on said roller member by said paste wax, said paste wax comprising an oil/fat component which has a consistency lower than that of a lubricating grease to be enclosed in said inner space of said outer member, wherein said lubricating grease contacts said paste wax within said inner space of said outer member."

As set forth above in connection with independent claim 1, the Goto, Batt, Scriebner and Swart references, alone or in any combination, do not teach or suggest a paste wax comprising an oil/fat component which has a consistency lower than that of a lubricating grease to be enclosed in an inner space of an outer member, as required by claim 1. Applicants respectfully submit that the foregoing arguments also apply to claim 14.

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, also fail to teach or suggest each and every feature of independent claim 14. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 14.

F. Claim 15

Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest at least the following feature of independent claim 15: "a solid wax-retaining step is performed such that melted solid wax is supplied to said plurality of provided rolling members, wherein said solid wax is solidified to retain said rolling

members on said roller member, and wherein said solid wax is formed of a material that does not chemically react with a lubricating grease and a joint boot."

As set forth above in connection with independent claim 8, the Goto, Batt, Scriebner and Swart references, alone or in any combination, do not teach or suggest solid wax formed of a material that does not chemically react with a lubricating grease and a joint boot, as required by claim 8. Applicants respectfully submit that the foregoing arguments also apply to claim 15.

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, also fail to teach or suggest each and every feature of independent claim 15. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 15.

G. Claim 17

In view of the foregoing arguments, Applicants respectfully submit that the Goto, Batt, Scriebner and Swart references, alone or in any combination, fail to teach or suggest each and every feature of independent claim 1.

Claim 17 depends from independent claim 1, and adds separate and patentable limitations to claim 1. As such, for this and the reasons set forth above, Applicants respectfully submit that dependent claim 17 also defines over the art of record.

CONCLUSION

In view of the foregoing amendments and arguments, Applicants believe the pending application is in condition for allowance.

Any fee due is authorized to be charged to our Deposit Account No. 12-0080, under Order No. TOW-129USRCE from which the undersigned is authorized to draw. If a requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely.

Dated: May 26, 2009

Respectfully submitted,

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